

Amendments to the Claims:

Please cancel claims 21-27 without disclaimer or prejudice to applicants' right to pursue the subject matters of these claims in the future.

Pursuant to 37 C.F.R. §1.121(c), this listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A process of cloning a nucleic acid in a desired orientation comprising the steps of:
 - (a) obtaining a single stranded fragment of the nucleic acid;
 - (b) ligating an oligonucleotide primer comprising at least one restriction enzyme recognition site to the 3' terminus of the fragment;
 - (c) producing a double-stranded nucleic acid using a primer complementary to the primer of step (b); and
 - (d) cloning the double-stranded nucleic acid into a desired vector.
2. (Original) The process of claim 1 wherein the nucleic acid is genomic DNA.
3. (Original) The process of claim 1 wherein the nucleic acid is cDNA.
4. (Original) The process of claim 1 wherein the nucleic acid is mRNA.
5. (Original) The process of claim 1 wherein step (b) further comprises ligating a specific primer to the 5' terminus of the fragment.
6. (Original) The process of claim 1 wherein step (c) further comprises using a primer complementary to the primer of claim 5.

7. (Original) The process of claim 5 wherein the primer comprises a restriction enzyme recognition site not present in the primer specific for the 3' terminus of the fragment.
8. (Original) The process of claim 1 wherein the ligation of step (b) is performed with T4 RNA ligase.
9. (Original) The process of claim 1 wherein step (c) is performed by polymerization with Klenow enzyme.
10. (Original) A process of cloning a nucleic acid in a desired orientation comprising the steps of:
 - (a) obtaining a single stranded fragment of the nucleic acid;
 - (b) ligating a double stranded adaptor comprising at least one restriction enzyme recognition site to each end of the fragment, wherein the adaptor ligated to the 5' terminus and the adaptor ligated to the 3' terminus differ in at least one restriction enzyme recognition site;
 - (c) amplifying the fragment by PCR with a primer complementary to a portion of the adaptor of step (b) ligated to the 5' terminus and a primer complementary to a portion of the adaptor of step (b) ligated to the 3' terminus, to obtain a double-stranded nucleic acid; and
 - (d) cloning the double-stranded nucleic acid into a desired vector.
11. (Original) The process of claim 10 further wherein the adaptor ligated to the 3' terminus of the fragment in step (b) has a 5' nucleotide overhang.
12. (Original) The process of claim 11 further wherein the adaptor ligated to the 5' terminus of the fragment in step (b) has a 3' nucleotide overhang.

13. (Currently Amended) The process of claim 10 ~~or 12~~ wherein the adaptors ligated to both ends of the fragment have nucleotide overhangs that differ from each other in sequence.
14. (Original) The process of claim 10 wherein the nucleic acid is genomic DNA.
15. (Original) The process of claim 10 wherein the nucleic acid is cDNA.
16. (Original) The process of claim 10 wherein the nucleic acid is aRNA.
17. (Original) The process of claim 10 wherein the ligation of step (b) is performed with T4 DNA ligase.
18. (Original) The process of claim 10 further comprising digesting the fragment of step (a) into smaller fragments using a restriction enzyme.
19. (Original) The process of claim 18 wherein the adaptors used in step (b) further comprise the full or partial sequence of the restriction enzyme recognition site for the restriction enzyme used to digest the fragment of step (a) into smaller fragments.
20. (Currently Amended) A DNA library prepared according to the process of claim 1 ~~or 10~~.
- 21-27. (Canceled)
28. (New) A DNA library prepared according to the process of claim 10.